

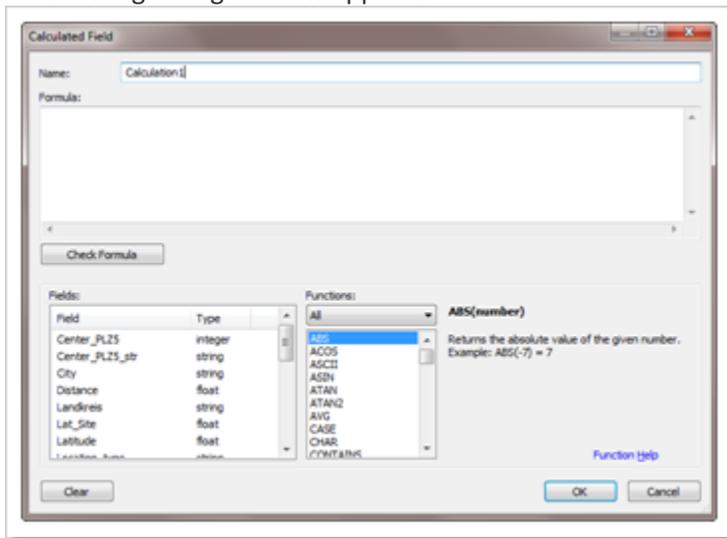
# Calculations in Tableau

A lot of people have done their data analysis and visualizations with Microsoft Excel before they joined the Tableau community. With an Excel user's eye view, a Calculated Field is pretty much the same as a named cell in Excel. It may contain a fixed value or a formula based on the results of other cells. And it may be used as an input parameter for formulas in other cells or simply display the result.

## How to Create and Use Calculated Fields in Tableau

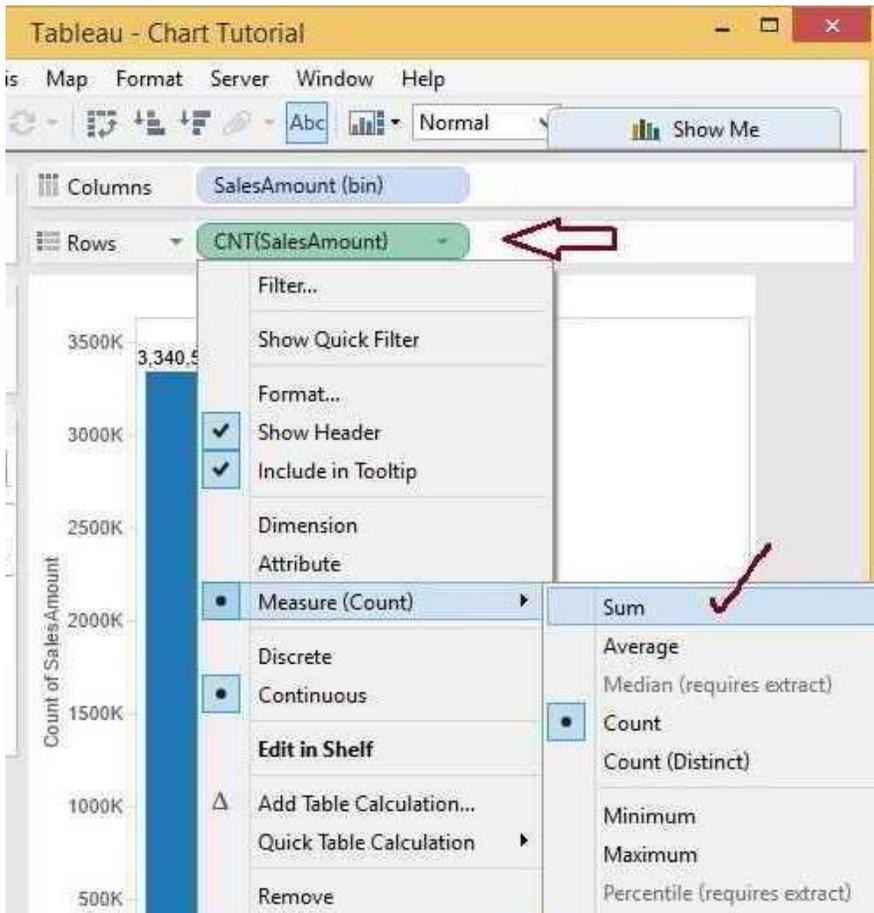
Here is a how-to tutorial on Calculated Fields in a nutshell:

1. Click on Analysis in the main menu or right click on a dimension or measure and select Create Calculated Field
2. The following dialog window appears:



3. Define a name for your Calculated Field
4. Type in the formula to define your Calculated Field
  - Insert fields  
You see all fields from the data source and all Calculated Fields (if you already defined some) in an area called "Fields" at the bottom left of the window. Double clicking on one of these fields inserts it into your formula above.
  - Insert a function  
The area "Functions" shows all available functions for Calculated Fields. Please be advised that the basic arithmetic operators are not included here. Again a double click on a function inserts it into your formula. The dropdown list above filters the list of functions by category and the text right to it provides a short information on how to use the selected function.
5. Click on the "Check Formula" button to make sure your calculation is valid and can directly be used in your workbook.
6. Finally click OK to create the calculated field.

Now you see it: your new Calculated Field immediately shows up in the data window on the left, either as a dimension or as a measure, depending on the result of your formula. Tableau automatically identifies whether your Calculated Field is a dimension (i.e. returns a string) or a measure (i.e. returns a number). Tableau even recognizes if your Calculated Field returns a date and shows this with the calendar symbol in the dimension's area.



### Brief Introduction to Table/Quick Table Calculations

When learning about how Tableau handles calculations, a really important concept is the distinction between regular calculations vs. what we call table calculations. A regular calculation, such as Sales Minus Profit, is passed as part of the query that Tableau asks of a data source and the computation is handled by the data source itself with only the result set being returned to Tableau. A table calculation is a secondary calculation that performed on top of the returned result set. This computation is done within Tableau. An example is as Running Total of Sales. A table calculation is indicated by this delta symbol on the pill.

